NON-CYTOLYTIC SOLUBLE FACTOR FROM ACTIVATED-EXPANDED CD4 CELLS

ABSTRACT OF THE DISCLOSURE

A new factor, Factor C, is produced by the activated-expanded autologous cells of cancer patients, HIV-1 infected patients, CFS patients, healthy patients, *etc.* Factor C has a molecular weight of about 70,000 to 80,000 daltons, is heat stable, has an amino acid sequence that is absent from the National Center for Biotechnology Information database, and whose amino acid sequence is not homologous to TNF family ligands. Factor C is derived from CD4 cells in a much greater quantity than from CD8 cells, and is derived from lymph cells in a greater quantity than from PBL cells. A double activation and expansion (activation-expansion) process using immobilized and soluble anti-CD3 mAb makes such Factor C. Factor C appears to inhibit transcription in virally-infected and tumor cells, and stimulates the proliferation of normal lymphocytes. Factor C exhibits synergistic activity with topoisomerase I, topoisomerase II, microtubule, and thymidylate synthetase active agents; is responsible for the synergistic induction of apoptosis; its effect is not secondary to enhanced cell cycling; inhibits the anti-apoptotic factor, NFKB implicated in chemoresistance; enhances uptake of doxorubicin in multi-drug resistant cells, increases covalent topoisomerase I-DNA complexes with topoisomerase I active drugs; and decreases thymidylate synthetase transcription in combination with 5-flurouracil. Factor C with the hormonal agent, tamoxifen, is responsible for the synergistic induction of apoptosis and exhibits synergism in estrogen-receptor-negative cell lines.